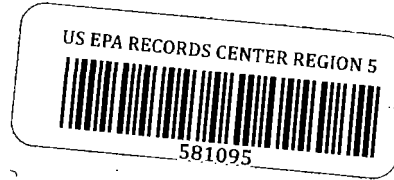


I.1
12/21/09



December 21, 2004

Mr. William Simes
On-Scene Coordinator
Emergency Response Branch
U.S. Environmental Protection Agency Region 5
77 West Jackson Boulevard
Chicago, IL 60604

**Subject: Final Removal Action Letter Report
Imel Battery Site
Fort Wayne, Allen County, Indiana
Technical Direction Document No. S05-0407-001
Tetra Tech Contract No. 68-W-00-129**

Dear Mr. Simes:

T N & Associates, Inc. (TN&A), a subcontractor for the Tetra Tech EM Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START), has prepared this final removal action letter report in accordance with the requirements of U.S. Environmental Protection Agency (U.S. EPA) Technical Direction Document (TDD) No. S05-0407-001. The scope of this TDD was to conduct removal action activities at the Imel Battery (Imel) site in Fort Wayne, Allen County, Indiana. Specifically, START was tasked to conduct oversight activities, collect post-removal soil samples, conduct air monitoring, document on-site conditions with written logbook notes and still photographs, and prepare this removal action letter report. Removal activities were conducted by U.S. EPA's Emergency and Rapid Response Services (ERRS) contractor, Environmental Restoration, Inc.

This removal action letter report summarizes the site background; discusses the removal action activities, including air monitoring and soil sampling activities; and provides a summary of the removal action. Enclosure 1 of this letter report presents a photographic log of removal activities, Enclosure 2 provides sample analytical results, and Enclosure 3 provides site-related figures.

Site Background

The Imel site is located at 6601 Decatur Road in Fort Wayne, Allen County, Indiana, on the southeast side of the city (see Figure 1). The Imel site occupies about five acres, is unsecured, and has one vacant building and three foundation pads. The site is surrounded by a commercial property to the south and residential properties to the west, north, and east.

Imel Battery and Lead Company operated at the site from the mid-1950s until about 1975. Mr. Ora Imel, who died in 1965, was the original site property owner. Mr. Imel's wife, Ms. Agnes Imel, is listed as the current property owner.

The Indiana Department of Environmental Management (IDEM) reported that battery cracking occurred in the north section of the site based on aerial photographs taken in 1956 and 1966. IDEM also reported that the south section of the site property appeared to have been operated as an auto salvage operation in conjunction with the Imel Battery and Lead Company. In addition, IDEM reported that aerial photographs of a property adjacent to the site showed potential disturbed soil, suggesting that materials may have been buried there.

Site soil samples collected by IDEM contained lead concentrations as high as 85,000 parts per million (ppm). On April 5, 2002, IDEM formally requested U.S. EPA assistance to mitigate immediate threats posed by the contaminated soil at the site.

On July 9, 2002, U.S. EPA On-Scene Coordinators (OSC) Fred Micke and William Simes and START conducted a removal assessment at the site. During this removal assessment, a Niton x-ray fluorescence (XRF) instrument, a real-time qualitative screening instrument for lead, was used to screen surface soil for sample collection. Lead and chromium were the most prevalent contaminants detected in site soil samples. Analytical results for soil samples included concentrations of total chromium and lead ranging from 1.1 to 1,400 milligrams per kilogram (mg/kg); and from 19.6 to 9,000 mg/kg, respectively. Toxicity characteristic leaching procedure (TCLP) lead concentrations in soil samples ranged from 0.05 to 746 milligrams per liter (mg/L).

The 2002 removal assessment report concluded that site conditions posed actual or potential threats to human health and the environment and that a removal action would mitigate such threats.

Removal Action Activities

Removal action activities at the site included clearing of trees, brush, and debris on site; excavation of lead-contaminated soil; treatment of hazardous lead-contaminated soil; transport of nonhazardous waste to a Subtitle D landfill; and site restoration. Each activity is discussed below.

On July 15, 2004, the START and ERRS contractors and OSC William Simes mobilized to the site. The ERRS crew began clearing vegetation around a concrete pad on the north side (Area A) of the site (see Figure 2).

On July 16, ERRS continued clearing vegetation in Area A of the site. During clearing activities, seven drums were discovered along the tree line south of the concrete pad. All the drums were rusted and in deteriorated condition. One drum was full of metal debris, one drum was approximately one-third full of a white powder, and the other drums were empty.

On July 19, ERRS began excavating and stockpiling soil from Area A of the site to prepare for soil stabilization activities. The soil was known to be contaminated with lead, based on previous sample analytical results. The soil was stockpiled on the concrete pad in Area A. A personal data ram (PDR), a real-time particulate air monitoring instrument, was placed on the east side of the site, the predominant downwind direction, to assist with health and safety monitoring. Excavation walls and floors were in Area A checked with a Niton XRF instrument to ensure that the soil cleanup criterion of 400 mg/kg lead had been met.

On July 21, ERRS began excavating and stockpiling lead-contaminated soil from the south area (Area B) of the site for disposal. The soil was known to be contaminated with lead based on previous sample analytical results. START collected a disposal characterization sample (IMEL-DISPOSAL) from the stockpiled Area B soil to be analyzed for TCLP metals, pH, reactive sulfide, and reactive cyanide.

On July 23, approximately 36 tons of the stabilization chemical, calcium sulfite, was delivered to the Imel site for treatment of Area A soil. Removal assessment sample analytical results for Area A soil had shown that its lead contamination exceeded the TCLP regulatory level of 5 mg/L, and that it was hazardous for lead. On July 26, ERRS began treatment of the Area A hazardous lead-contaminated soil with a 4 percent-by-weight addition of calcium sulfite to the soil as recommended by the vendor.

On July 27, analytical results for sample IMEL-DISPOSAL showed that the stockpiled Area B soil had a TCLP lead concentration of 53 mg/L (see Table 1). To further characterize site soils, START collected three additional disposal characterization samples. One sample was collected from the treated Area A soil stockpile (sample IMEL-AREA-A-DIS) one sample was collected from the Area B soil stockpile on the north side of Area B, (sample IMEL-AREA-B-N-DIS), and one sample was collected from the Area B soil stockpile on the south side of Area B, (sample IMEL-AREA-B-S-DIS). All three samples were analyzed for TCLP metals, pH, reactive sulfide, and reactive cyanide.

On July 29, ERRS and START demobilized from the Imel site pending receipt of disposal characterization sample analytical results for the Area A and B stockpiles. The sample analytical results are shown in Table 1.

On August 3, ERRS, START, and U.S. EPA remobilized to the site. Approximately 54 tons of calcium sulfite was delivered to the site for treatment of Area B soil. Treatment of the Area B south stockpile was conducted with a 4 percent-by-weight addition of calcium sulfite to the soil.

On August 6, START collected one sample (IMEL-AREA-B-S-2DIS) from the treated Area B soil stockpile for disposal characterization. ERRS was demobilized pending receipt of the sample analytical results.

On September 20, ERRS and START remobilized to the site for additional removal activities. From September 20 through 24, 2004, ERRS transported a total of approximately 5,087 tons of treated and non-treated lead-contaminated soil from the Area B south, Area B north, and Area A stockpiles to the National Serv-All Landfill at 6231 MacBeth Road in Fort Wayne, Indiana.

On October 4, ERRS and START remobilized to the site for backfilling activities. Backfilling and seeding activities were completed on October 6, and ERRS and START demobilized from the site.

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
IMEL BATTERY SITE
FORT WAYNE, ALLEN COUNTY, INDIANA

Sample ID	pH	TCLP Lead (mg/L)	TCLP Barium (mg/L)	TCLP Cadmium (mg/L)	Reactive Cyanide	Reactive Sulfide
<i>Pretreatment samples</i>						
IMEL-DISPOSAL	7.9	53	1.1	0.031	ND	ND
IMEL-AREA-B-N-DIS	NA	1.1	0.88	ND	NA	NA
IMEL-AREA-B-S-DIS	NA	3.8	0.87	ND	NA	NA
<i>Post-treatment sample</i>						
IMEL-AREA-A-DIS	NA	1.4	ND	0.029	NA	NA
IMEL-AREA-B-S-2DIS	NA	0.26	ND	0.015	NA	NA

Notes:

NA= Not analyzed

ND=Not detected

The daily air concentrations of particulates measured by the PDR did not exceed 0.50 milligram per cubic meter (mg/m³), the action level specified in the site health and safety plan. All site activities were documented in the site logbook. START took photographs of site activities (see Enclosure 1) and documented the photograph information in the site logbook.

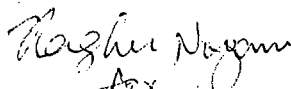
Summary

Beginning on July 15, 2004, ERRS, START, and U.S. EPA conducted site clearance activities and excavation of lead-contaminated soil. Excavation walls and floors were checked with a Niton XRF instrument to determine the extent of excavation and to ensure that the soil cleanup criterion of 400 mg/kg lead had been met. ERRS treated Area A and B hazardous lead-contaminated soil with a 4 percent-by-weight addition of calcium sulfite as recommended by the vendor. From September 20 through 24, ERRS transported approximately 5,087 tons of treated lead-contaminated soil to the National

Serv-All Landfill at 6231 Macbeth Road in Fort Wayne, Indiana. Backfilling and seeding of the excavated areas were completed on October 5 and 6.

If you have any questions or comments regarding this letter report, please call me at (317) 313-1136.

Sincerely,



Karen Campbell

TN&A START Project Manager

Enclosure 1	Photographic Log
Enclosure 2	Sample Analytical Results
Enclosure 3	Figures

cc: Lorraine Kosik, U.S. EPA START Project Officer
Therese Gioia, Tetra Tech START Program Manager

ENCLOSURE 1
PHOTOGRAPHIC LOG
(Six Pages)



Photograph No.: 1
TDD Number: S05-0407-001
Photographer: K. Campbell, START
Location: Fort Wayne, Allen County, Indiana
Subject: ERRS clearing trees for Area A excavation

Orientation: Northeast
Date: July 16, 2004
Site Name: Imel Battery Site



Photograph No.: 2
TDD Number: S05-0407-001
Photographer: K. Campbell, START
Location: Fort Wayne, Allen County, Indiana
Subject: ERRS loading tires into roll-off box

Orientation: Southwest
Date: July 19, 2004
Site Name: Imel Battery Site



Photograph No.:	3	Orientation:	East
TDD Number:	S05-0407-001	Date:	July 19, 2004
Photographer:	K. Campbell, START	Site Name:	Imel Battery Site
Location:	Fort Wayne, Allen County, Indiana		
Subject:	Air monitoring station downwind of excavation		



Photograph No.:	4	Orientation:	Southeast
TDD Number:	S05-0407-001	Date:	July 19, 2004
Photographer:	K. Campbell, START	Site Name:	Imel Battery Site
Location:	Fort Wayne, Allen County, Indiana		
Subject:	55-gallon drum containing metal parts		



Photograph No.: 5
TDD Number: S05-0407-001
Photographer: K. Campbell, START
Location: Fort Wayne, Allen County, Indiana
Subject: Excavating Area A in north section of site

Orientation: Southeast
Date: July 19, 2004
Site Name: Imel Battery Site



Photograph No.: 6
TDD Number: S05-0407-001
Photographer: K. Campbell, START
Location: Fort Wayne, Allen County, Indiana
Subject: Excavating south side of Area B

Orientation: West
Date: July 21, 2004
Site Name: Imel Battery Site



Photograph No.:	7	Orientation:	Southwest
TDD Number:	S05-0407-001	Date:	July 22, 2004
Photographer:	K. Campbell, START	Site Name:	Imel Battery Site
Location:	Fort Wayne, Allen County, Indiana		
Subject:	ERRS excavating and stockpiling soil in Area B		



Photograph No.:	8	Orientation:	Southeast
TDD Number:	S05-0407-001	Date:	July 26, 2004
Photographer:	K. Campbell, START	Site Name:	Imel Battery Site
Location:	Fort Wayne, Allen County, Indiana		
Subject:	ERRS treating Area A soil with calcium sulfite		



Photograph No.:	11	Orientation:	East
TDD Number:	S05-0407-001	Date:	September 23, 2004
Photographer:	K. Campbell, START	Site Name:	Imel Battery Site
Location:	Fort Wayne, Allen County, Indiana		
Subject:	Loading trucks for transport and disposal of Area A soil		



Photograph No.:	12	Orientation:	West
TDD Number:	S05-0407-001	Date:	October 5, 2004
Photographer:	K. Campbell, START	Site Name:	Imel Battery Site
Location:	Fort Wayne, Allen County, Indiana		
Subject:	Backfilling Area A excavation		

ENCLOSURE 2
SAMPLE ANALYTICAL RESULTS
(15 Sheets)



July 28, 2004

John Behrens
Environmental Restoration
16660 South Canal Street
South Holland, IL 60437

RE: IMEL Battery / Ft. Wayne, In
Dear John Behrens:

Work Order No.: ME0407549

SIMALABS - A Division of Microbac Laboratories, Inc. received 1 sample on 7/22/04 10:00:00 AM for the analyses presented in the following report.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted. This report includes the numbered pages as well as the Cooler Inspection Report and Chain of Custody form(s).

The SIMALABS Division is an accredited laboratory under the requirements of the National Environmental Laboratory Accreditation Program (IL EPA lab #100435). All data included has been reviewed for and meets all project specific and Quality Control requirements of this accreditation, unless otherwise noted. This report shall not be reproduced except in full, without the written approval of the SIMALABS Division.

We appreciate the opportunity to service your analytical needs. If you have any questions, please feel free to contact us.

Sincerely,
Microbac Laboratories, Inc.
SIMALABS Division



Ronald J. Misiunas
Client Services Manager

Enclosures



Work Order Sample Summary

Date: 28-Jul-04

CLIENT: Environmental Restoration
Project: IMEL Battery / Ft. Wayne, In
Lab Order: ME0407549

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
ME0407549-01A	IMEL Disposal	IMEL Disposal	7/21/04 2:05:00 PM	7/22/04

SIMALABS

ANALYTICAL RESULTS

Date: *Wednesday, July 28, 2004*

Client:	Environmental Restoration	Client Project:	IMEL Battery / Ft. Wayne, In
Client Sample ID:	IMEL Disposal	Work Order:	ME0407549
Sample Description:	IMEL Disposal	SIMALABS ID:	ME0407549-01A
Sample Matrix:	Soil		
Collection Date:	07/21/04		
Date Received:	07/22/04		

Analyses	Samp Type	Result	Reporting Limit	Qual	Units	DF	Date / Time Analyzed
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MERCURY, TCLP LEACHED		Method: SW7470A	Prep Date/Time: 7/26/04 6:30:00 PM		Analyst: DN		
Mercury	A	ND	0.0010		mg/L	1	7/27/04 11:57:24 AM

TCLP METALS BY ICP		Method: SW1311/6010B	Prep Date/Time: 7/26/04 5:00:00 PM		Analyst: DN		
Arsenic	A	ND	0.20		mg/L	1	7/27/04 2:24:00 PM
Barium	A	1.1	0.50		mg/L	1	7/27/04 2:24:00 PM
Cadmium	A	0.031	0.010		mg/L	1	7/27/04 2:24:00 PM
Chromium	A	ND	0.050		mg/L	1	7/27/04 2:24:00 PM
Lead	A	53	0.050		mg/L	1	7/27/04 2:24:00 PM
Selenium	A	ND	0.20		mg/L	1	7/27/04 2:24:00 PM
Silver	A	ND	0.010		mg/L	1	7/27/04 2:24:00 PM

CORROSIVITY BY PH		Method: SW9045C	Prep Date/Time:		Analyst: NR		
pH	A	7.9	0		pH Units	1	7/23/04 3:25:00 PM

CYANIDE, REACTIVE		Method: SW7.3.3.2_R3	Prep Date/Time: 7/27/04 8:45:00 AM		Analyst: AES		
Reactive Cyanide	A	ND	99		mg/Kg	1	7/27/04 4:22:30 PM

SULFIDE, REACTIVE		Method: SW7.3.4.2_R3	Prep Date/Time: 7/27/04 8:45:00 AM		Analyst: AG		
Reactive Sulfide	A	ND	50		mg/Kg	1	7/27/04 3:15:00 PM

Samp Type:	A - Analyte, S - Surrogate, I - Internal Standard T - Tentatively Identified Compound (TIC, concentration estimated)	DF - Dilution Factor
Qual:	ND - Not Detected at the Reporting Limit B - Detected in the associated Method Blank * - Exceeds Maximum Contaminant Level	S - Spike recovery outside recovery limits SD - Value diluted out R - RPD outside accepted recovery limits E - Value above quantitation range

I - Matrix Interference

H - Analyte was prepared and/or analyzed outside of the analytical method holding time
 250 West 84th Drive, Merrillville, IN 46410 TEL 800 536 8379 TEL 219 769 8378 FAX 219 769 1664

A Division of **Microbac** Laboratories, Inc.



July 30, 2004

John Behrens
Environmental Restoration
16660 South Canal Street
South Holland, IL 60437

RE: IMEL Battery - Fort Wayne, IN
Dear John Behrens:

Work Order No.: ME0407718

SIMALABS - A Division of Microbac Laboratories, Inc. received 3 samples on 7/28/04 for the analyses presented in the following report.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

This is a preliminary report that contains incomplete data or data that has not been fully validated. Caution should be exercised in the use of any data presented as final reported results may not reflect the values presented.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Work Order Sample Summary

Date: 30-Jul-04

CLIENT: Environmental Restoration
Project: IMEL Battery - Fort Wayne, IN
Lab Order: ME0407718

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
ME0407718-01A	IMEL-AREA-A-DIS	IMEL-AREA-A-DIS	7/27/04 1:10:00 PM	7/28/04
ME0407718-02A	IMEL-AREA-B-N-DIS	IMEL-AREA-B-N-DIS	7/27/04 4:30:00 PM	7/28/04
ME0407718-03A	IMEL-AREA-B-S-DIS	IMEL-AREA-B-S-DIS	7/27/04 4:45:00 PM	7/28/04

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A Division of Microbne Laboratories, Inc.

SIMALABS

ANALYTICAL RESULTS

Date: Friday, July 30, 2004

Client:	Environmental Restoration	Client Project:	IMEL Battery - Fort Wayne, I
		Work Order:	ME0407718
Client Sample ID:	IMEL-AREA-A-DIS	SIMALABS ID:	ME0407718-01A
Sample Description:	IMEL-AREA-A-DIS		
Sample Matrix:	Soil		
Collection Date:	07/27/04		
Date Received:	07/28/04		

Analyses	Samp Type	Result	Reporting Limit	Qual	Units	DF	Date / Time Analyzed
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MERCURY, TCLP LEACHED		Method: SW7470A		Prep Date/Time: 7/29/04 2:45:00 PM		Analyst: TMG	
Mercury	A	ND	0.0010		mg/L	1	7/30/04 10:15:56 AM

TCLP METALS BY ICP		Method: SW1311/6010B		Prep Date/Time: 7/29/04 12:10:00 PM		Analyst: TMG	
Arsenic	A	ND	0.20		mg/L	1	7/29/04 7:28:00 PM
Barium	A	ND	0.50		mg/L	1	7/29/04 7:28:00 PM
Cadmium	A	0.029	0.010		mg/L	1	7/29/04 7:28:00 PM
Chromium	A	ND	0.050		mg/L	1	7/29/04 7:28:00 PM
Lead	A	1.4	0.050		mg/L	1	7/29/04 7:28:00 PM
Selenium	A	ND	0.20		mg/L	1	7/29/04 7:28:00 PM
Silver	A	ND	0.010		mg/L	1	7/29/04 7:28:00 PM

IGNITABILITY (OPEN CUP FLASHPOI		Method: D92-90 MOD		Prep Date/Time:		Analyst: DL	
Ignitability	A	>170	30		°F	1	7/29/04 6:00:00 PM

Samp Type:	A - Analyte, S - Surrogate, I - Internal Standard T - Tentatively Identified Compound (TIC, concentration estimated)	DF - Dilution Factor
Qual:	<div style="font-size: 2em; font-weight: bold; text-align: center; letter-spacing: 0.5em;">P r e l i m i n a r y</div> <div style="font-size: 0.8em;"> ND - Not Detected at the Reporting Limit B - Detected in the associated Method Blank * - Exceeds Maximum Contaminant Level </div>	<div style="font-size: 0.8em;"> S - Spike recovery outside recovery limits SD - Value diluted out R - RPD outside accepted recovery limits E - Value above quantitation range </div>

H - Analyte was prepared and/or analyzed outside of the analytical method holding time
 250 West 84th Drive, Merrillville, IN 46410 TEL 800 536 8379 TEL 219 769 8378 FAX 219 769 1664

A Division of Microbuc Laboratories, Inc

SIMALABS

ANALYTICAL RESULTS

Date: Friday, July 30, 2004

Client:	Environmental Restoration	Client Project:	IMEL Battery - Fort Wayne, I
Client Sample ID:	IMEL-AREA-B-N-DIS	Work Order:	ME0407718
Sample Description:	IMEL-AREA-B-N-DIS	SIMALABS ID:	ME0407718-02A
Sample Matrix:	Soil		
Collection Date:	07/27/04		
Date Received:	07/28/04		

Analyses	Samp Type	Result	Reporting Limit	Qual	Units	DF	Date / Time Analyzed
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MERCURY, TCLP LEACHED Method: SW7470A Prep Date/Time: 7/29/04 2:45:00 PM Analyst: TMG

Mercury	A	ND	0.0010		mg/L	1	7/30/04 10:17:19 AM
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TCLP METALS BY ICP Method: SW1311/6010B Prep Date/Time: 7/29/04 12:10:00 PM Analyst: TMG

Arsenic	A	ND	0.20		mg/L	1	7/29/04 7:33:00 PM
Barium	A	0.88	0.50		mg/L	1	7/29/04 7:33:00 PM
Cadmium	A	ND	0.010		mg/L	1	7/29/04 7:33:00 PM
Chromium	A	ND	0.050		mg/L	1	7/29/04 7:33:00 PM
Lead	A	1.1	0.050		mg/L	1	7/29/04 7:33:00 PM
Selenium	A	ND	0.20		mg/L	1	7/29/04 7:33:00 PM
Silver	A	ND	0.010		mg/L	1	7/29/04 7:33:00 PM

Samp Type:	A - Analyte, S - Surrogate, I - Internal Standard T - Tentatively Identified Compound (TIC, concentration estimated)	DF - Dilution Factor
Qual:	ND - Not Detected at the Reporting Limit B - Detected in the associated Method Blank * - Exceeds Maximum Contaminant Level	S - Spike recovery outside recovery limits SD - Value diluted R - RPD outside accepted recovery limits E - Value above quantitation range

H - Analyte was prepared and/or analyzed outside of the analytical method holding time
 250 West 84th Drive, Merrillville, IN 46410 TEL 800 536 8379 TEL 219 769 8378 FAX 219 769 1664

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ANALYTICAL RESULTS

Date: *Friday, July 30, 2004*

Client:	Environmental Restoration	Client Project:	IMEL Battery - Fort Wayne, I
Client Sample ID:	IMEL-AREA-B-S-DIS	Work Order:	ME0407718
Sample Description:	IMEL-AREA-B-S-DIS	SIMALABS ID:	ME0407718-03A
Sample Matrix:	Soil		
Collection Date:	07/27/04		
Date Received:	07/28/04		

Analyses	Samp Type	Result	Reporting Limit	Qual	Units	DF	Date / Time Analyzed
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MERCURY, TCLP LEACHED		Method: SW7470A		Prep Date/Time: 7/29/04 2:45:00 PM		Analyst: TMG	
Mercury	A	ND	0.0010		mg/L	1	7/30/04 10:18:41 AM

TCLP METALS BY ICP		Method: SW1311/6010B		Prep Date/Time: 7/29/04 12:10:00 PM		Analyst: TMG	
Arsenic	A	ND	0.20		mg/L	1	7/29/04 7:38:00 PM
Barium	A	0.87	0.50		mg/L	1	7/29/04 7:38:00 PM
Cadmium	A	ND	0.010		mg/L	1	7/29/04 7:38:00 PM
Chromium	A	ND	0.050		mg/L	1	7/29/04 7:38:00 PM
Lead	A	3.8	0.050		mg/L	1	7/29/04 7:38:00 PM
Selenium	A	ND	0.20		mg/L	1	7/29/04 7:38:00 PM
Silver	A	ND	0.010		mg/L	1	7/29/04 7:38:00 PM

Samp Type:	A - Analyte, S - Surrogate, I - Internal Standard	DF - Dilution Factor
Qual:	T - Tentatively Identified Compound (TIC, concentration estimated)	
	ND - Not Detected at the Reporting Limit	S - Spike recovery outside recovery limits
	B - Detected in the associated Method Blank	SD - Value diluted
	* - Exceeds Maximum Contaminant Level	R - RPD outside accepted recovery limits
		E - Value above quantitation range
		I - Matrix Interference

H - Analyte was prepared and/or analyzed outside of the analytical method holding time
 250 West 84th Drive, Merrillville, IN 46410 TEL 800 536 8379 TEL 219 769 8378 FAX 219 769 1664

A Division of **Microbial** Laboratories, Inc.

Microbac

August 13, 2004

John Behrens
Environmental Restoration
16660 South Canal Street
South Holland, IL 60437

RE: Merrill Myers / IMEL Battery

Work Order No.: ME0408248

Dear John Behrens:

Microbac Laboratories, Inc. received 2 samples on 8/7/2004 11:40:00 AM for the analyses presented in the following report.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted. This report includes the numbered pages as well as the Cooler Inspection Report and Chain of Custody form(s).

The SIMALABS Division is an accredited laboratory under the requirements of the National Environmental Laboratory Accreditation Program (IL EPA lab #100435). All data included has been reviewed for and meets all project specific and Quality Control requirements of this accreditation, unless otherwise noted. This report shall not be reproduced except in full, without the written approval of the SIMALABS Division.

We appreciate the opportunity to service your analytical needs. If you have any questions, please feel free to contact us.

Sincerely,
Microbac Laboratories, Inc.
SIMALABS Division



Ronald J. Misiunas
Client Services Manager

Enclosures

Microbac

Work Order Sample Summary

Date: 13-Aug-04

CLIENT: Environmental Restoration
Project: Merrill Myers / IMEL Battery
Lab Order: ME0408248

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
ME0408248-01A	IMEL-Area-B-S-2 DIS	IMEL-Area-B-S-2 DIS	8/6/2004 9:00:00 AM	8/7/2004
ME0408248-02A	MM-West-RES	MM-West-RES	8/6/2004 10:30:00 AM	8/7/2004

Microbac

ANALYTICAL RESULTS

Date: Friday, August 13, 2004

Client: Environmental Restoration
Client Project: Merrill Myers / IMEL Battery
Client Sample ID: IMEL-Area-B-S-2 DIS
Work Order: ME0408248
Sample Description: IMEL-Area-B-S-2 DIS
SIMALABS ID: ME0408248-01A
Sample Matrix: Soil
Collection Date: 08/06/04
Date Received: 08/07/04

Analyses	Samp Type	Result	Reporting Limit	Qual	Units	DF	Date / Time Analyzed
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MERCURY, TCLP LEACHED Method: SW7470A Prep Date/Time: 8/9/2004 10:55:00 AM Analyst: DN

Mercury	A	ND	0.0010		mg/L	1	8/9/2004 3:58:57 PM
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TCLP METALS BY ICP Method: SW1311/6010B Prep Date/Time: 8/9/2004 10:52:00 AM Analyst: DN

Arsenic	A	ND	0.20		mg/L	1	8/9/2004 6:31:00 PM
Barium	A	ND	0.50		mg/L	1	8/9/2004 6:31:00 PM
Cadmium	A	0.015	0.010		mg/L	1	8/9/2004 6:31:00 PM
Chromium	A	ND	0.050		mg/L	1	8/9/2004 6:31:00 PM
Lead	A	0.26	0.050		mg/L	1	8/9/2004 6:31:00 PM
Selenium	A	ND	0.20		mg/L	1	8/9/2004 6:31:00 PM
Silver	A	ND	0.010		mg/L	1	8/9/2004 6:31:00 PM

Samp Type: A - Analyte, S - Surrogate, I - Internal Standard
DF - Dilution Factor
Qual: T - Tentatively Identified Compound (TIC, concentration estimated)
 ND - Not Detected at the Reporting Limit
 B - Detected in the associated Method Blank
 * - Exceeds Maximum Contaminant Level
 S - Spike recovery outside recovery limits
 SD - Value diluted out
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 I - Matrix Interference
 H - Analyte was prepared and/or analyzed outside of the analytical method holding time

Microbac

ANALYTICAL RESULTS

Date: Friday, August 13, 2004

Client: Environmental Restoration

Client Project: Merrill Myers / IMEL Battery

Client Sample ID: MM-West-RES

Work Order: ME0408248

Sample Description: MM-West-RES

SIMALABS ID: ME0408248-02A

Sample Matrix: Aqueous

Collection Date: 08/06/04

Date Received: 08/07/04

Analyses	Samp Type	Result	Reporting Limit	Qual	Units	DF	Date / Time Analyzed
PESTICIDES/PCBS							
		Method: SW8081A	Prep Date/Time: 8/9/2004 8:52:00 AM	Analyst AS			
4,4'-DDD	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
4,4'-DDE	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
4,4'-DDT	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Aldrin	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Alpha-BHC	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Beta-BHC	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Chlordane	A	ND	10		µg/L	1	8/11/2004 6:45:00 PM
delta-BHC	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Dieldrin	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Endosulfan I	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Endosulfan II	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Endosulfan Sulfate	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Endrin	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Endrin Aldehyde	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Endrin Ketone	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Gamma-BHC	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Heptachlor	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Heptachlor Epoxide	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Methoxychlor	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Toxaphene	A	ND	10		µg/L	1	8/11/2004 6:45:00 PM
Aroclor 1016	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Aroclor 1221	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Aroclor 1232	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Aroclor 1242	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Aroclor 1248	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Aroclor 1254	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Aroclor 1260	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Aroclor 1262	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Aroclor 1268	A	ND	1.0		µg/L	1	8/11/2004 6:45:00 PM
Surr: Tetrachloro-m-xylene	S	120	7.58-153		%REC	1	8/11/2004 6:45:00 PM

Samp Type: A - Analyte, S - Surrogate, I - Internal Standard

DF - Dilution Factor

T - Tentatively Identified Compound (TIC, concentration estimated)

Qual: ND - Not Detected at the Reporting Limit

S - Spike recovery outside recovery limits

I - Matrix Interference

B - Detected in the associated Method Blank

SD - Value diluted out

* - Exceeds Maximum Contaminant Level

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Analyte was prepared and/or analyzed outside of the analytical method holding time

Microbac

ANALYTICAL RESULTS

Date: Friday, August 13, 2004

Client:	Environmental Restoration	Client Project:	Merrill Myers / IMEL Battery
Client Sample ID:	MM-West-RES	Work Order:	ME0408248
Sample Description:	MM-West-RES	SIMALABS ID:	ME0408248-02A
Sample Matrix:	Aqueous		
Collection Date:	08/06/04		
Date Received:	08/07/04		

Analyses	Samp Type	Result	Reporting Limit	Qual	Units	DF	Date / Time Analyzed
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PESTICIDES/PCBS

Method: SW8081A

Prep Date/Time: 8/9/2004 8:52:00 AM

Analyst: AS

Surr: Decachlorobiphenyl	S	105	15.4-189	%REC	1	8/11/2004 6:45:00 PM
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Samp Type:	A - Analyte, S - Surrogate, I - Internal Standard T - Tentatively Identified Compound (TIC, concentration estimated)	DF - Dilution Factor:	
Qual:	ND - Not Detected at the Reporting Limit B - Detected in the associated Method Blank * - Exceeds Maximum Contaminant Level	S - Spike recovery outside recovery limits SD - Value diluted out R - RPD outside accepted recovery limits H - Value above quantitation range	I - Matrix Interference

H - Analyte was prepared and/or analyzed outside of the analytical method holding time.

Microbac Laboratories, Inc.

250 W 84th Drive
Merrillville, IN 46410
(219) 769-8378

COOLER INSPECTION

Saturday, August 07, 2004

Client Name ER - SOUTH HOLLAND, IL

Work Order Number ME0408248

Checklist completed by

Signature

Date

Date / Time Received:

8/7/2004 11:40:00 AM

Received by:

Reviewed by:

Initials

Date

Carrier name: FedEx

After-Hour Arrival?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody included sufficient client identification?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody included sufficient sample collector information?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody included a sample description?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody identified the appropriate matrix?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody included date of collection?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody included time of collection?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody identified the appropriate number of containers?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody identified the appropriate preservatives?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Samples properly preserved?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

If No, adjusted by?

Date/Time

Chain of custody included the requested analyses?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Samples received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Container/Temp Blank temperature	Temp: 3 °C	
VOA vials have zero headspace?	No VOA vials submitted <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

General Comments:

Sample ID	Client Sample ID	Cont. Lot #	Comments
ME0408248-01A	IMEL-Area-B-S-2 DIS		
ME0408248-02A	MM-West-RES		

Client representative contacted:

Date contacted:

Contacted by:

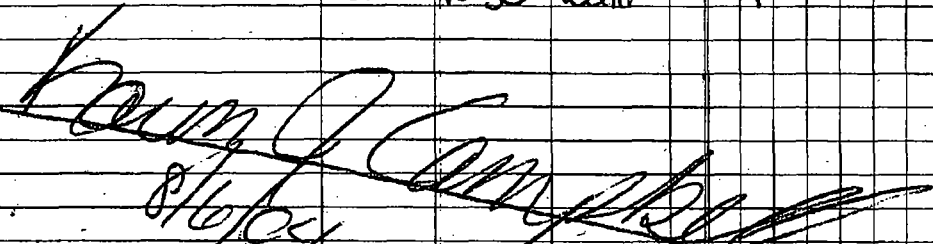
Regarding:

Notes:



200 East Randolph Drive, Suite 4700
Chicago, IL 60601
312-856-8700
Fax 312-938-0118

Page 1 of 1

Chicago Office		Chain of Custody Record No.		Preservative Added	
200 East Randolph Drive, Suite 4700 Chicago, IL 60601 312-856-8700 Fax 312-938-0118		Lab PO#:	Lab:	1770	
				No./Container Types	Analysis Required
Project name: IMEL Battery/McNeill Meyers	Technical contact: John Behrens	Field sampler: Karen Campbell			
Project number:	TrEMI project manager:	Field sampler's signature: Karen Campbell			
Sample ID	Sample Location	Date	Time	Matrix	MS / MSD
IMEL-AREA-B-S-2 DIS		8/6/04	0900	Soil	
MM- WEST-RES		1	1030	Water	
<div style="text-align: center;">  8/6/04 </div>					

	Name (print)	Company Name	Date	Time
Relinquished by: <i>Haren Campbell</i>	Haren Campbell	TN + Assoc / ER	8/16/04	1045
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by: <i>Dan Palrch</i>	Dan Palrch	Microbac	8-20-04	1140

Turnaround time/remarks:

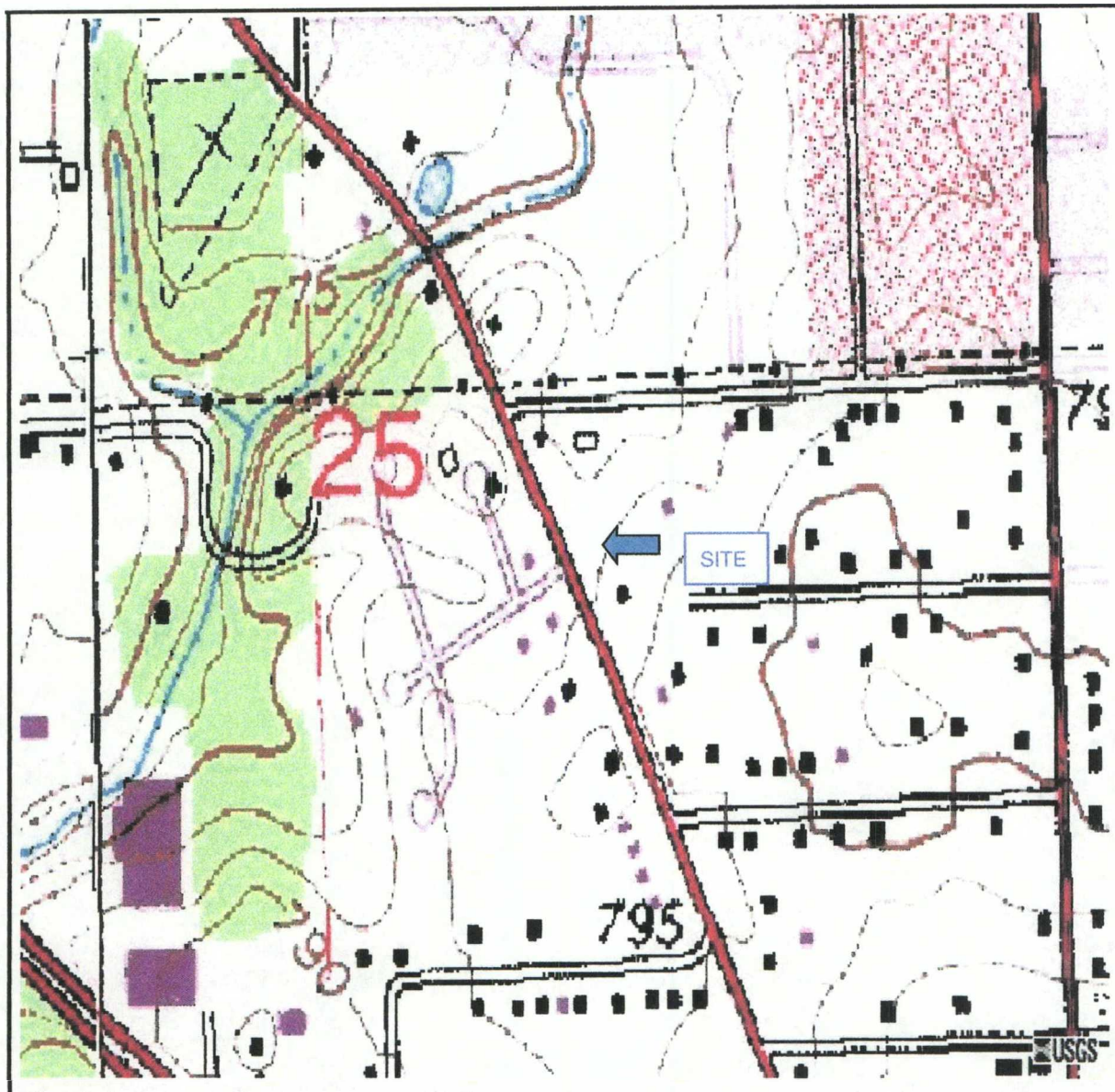
⚡ No Rush email results to:
jbehrens@erllc.com + kcampbell@trainc.com

Fed Ex #:

ENCLOSURE 3

FIGURES

(Two Sheets)



0 1/4 1/2 3/4 1 1 1/4 1 1/2 1 3/4 2 2 1/4 2 1/2 2 3/4 3 3 1/4 3 1/2 3 3/4 4 4 1/4 4 1/2 4 3/4 5 5 1/4 5 1/2 5 3/4 6 6 1/4 6 1/2 6 3/4 7 7 1/4 7 1/2 7 3/4 8 8 1/4 8 1/2 8 3/4 9 9 1/4 9 1/2 9 3/4 10



NORTH

IMEL BATTERY SITE
FORT WAYNE, ALLEN COUNTY, INDIANA

TDD No. S05-0407-001

FIGURE 1
SITE LOCATION MAP

Source: Modified from TerraServer, USGS Topographic Map for Fort Wayne, Indiana, 1976



T N & Associates, Inc.
Engineering and Science

